



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,743	02/27/2004	Stefan Bengt Edlund	ARC920030019US1	8420
61542 7590 04/15/2009 LEONARD T. GUZMAN IBM CORP., LAW DEPT., C4TA/J2B 650 HARRY ROAD SAN JOSE, CA 95120-6099				
EXAMINER				
HO, BINH VAN				
ART UNIT		PAPER NUMBER		
2163				
NOTIFICATION DATE		DELIVERY MODE		
04/15/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ARC1PL@us.ibm.com

### Office Action Summary

**Application No.**

10/789,743

**Applicant(s)**

EDLUND ET AL.

**Examiner**

BINH V. HO

**Art Unit**

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/27/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-893)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

1. This is a response to amendment filed 12/15/2008.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over James (U.S. 2003/0217169) in view of Challenger (U.S. 6,026,413).

(Claim 16)

James discloses substantially all of the elements, in figures 1-3, in a client-server computing system having a cache and storing eXtensible Markup Language (XML) data as data objects, a method for determining invalid cached objects comprising transforming XML data into a format suitable for a client application based on a set of transformation rules ("XML formatted documents which can be transformed into other formats according to instructions included in corresponding XSL stylesheet documents", paragraph [0019]); determining dependencies between cached objects and XML data related to the cached objects ("Based upon the freshness requirements of the XML document and the XSL document, it can be determined whether located transformed content satisfies the freshness requirements. If so, the located transformed content can be returned to the client process 102 over the public network 104", paragraph [0022]);

except monitoring updates to the related data; and determining the cached objects that are affected by changes to the related data based on the dependencies, where data is represented as a tree structure having a plurality of nodes and the cached objects that are affected by the data changes are determined using the tree structure. Challenger teaches in figures 1, 5, 12, 18, and 27-30, the cache manager 1 keeps track of these dependencies. Whenever a process modifies state which could affect the value of a complex object in a cache, the process specifies the underlying data which it is updating, col. 8, lines 54-67 and col. 9, lines 1-6, col. 8, (monitoring updates to the related data; and determining the cached objects that are affected by changes to the related data based on the dependencies), a directed graph in which each node is a leaf node  $r_1 \dots r_3$  or a maximal node  $co_1, co_2$ . Recall that a leaf node is a node which is not the target of any edges and a maximal node is a node which is not the source of any edges, col. 9, lines 7-25 (where data is represented as a tree structure having a plurality of nodes) and The application also uses APIs to notify the object manager 1 of records  $r_1 \dots r_4$  which have changed. When the cache manager 1 is notified of changes to a record  $r_1 \dots r_4$ , it must identify which complex objects  $co_1, co_2$  have been affected and cause the identified complex objects to be deleted (or updated) from any caches 2 containing them, col. 9, lines 26-38, (and the cached objects that are affected by the data changes are determined using the tree structure). It would have been obvious to one having ordinary skill in the art at the time the invention was made to reduce the overhead of dynamic data of an object dependence graph (node, tree) set of updates to caches consistently by managing dependencies.

### **Response To The Arguments**

4. Applicant's arguments with respect to claim 16 have been considered but are moot in view of the new ground(s) of rejection.

### **Conclusion**

5. Applicant's amendment necessitated the new ground of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**Inquiry**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh V. Ho whose telephone number is 571 272 8583. The examiner can normally be reached on M-F from 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on 571 272 1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung T Vy/  
Primary Examiner, Art Unit 2163

Binh V Ho  
Examiner  
Art Unit 2163